LANDSCAPE DESIGN AND INSTALLATION
Lesson 21: LANDSCAPE INSTALLATION

I. LESSON DESCRIPTION

Students review a planting and staking guide in class, then participate in a woody plant installation. *Estimated time requirement for this lesson is 60 minutes.*

Curriculum Standards: National Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards, National Council for Agricultural Education, 2009:

- AFNR LifeKnowledge® and Cluster Skills Standards (CS):
    - CS.01.01.01.a. Work productively with a group or independently.
    - CS.03.01.01.a. Use basic technical and business writing skills.
    - CS.08.01.01.a. Identify standard tools, equipment, and safety procedures related to a specific task.
    - CS.08.01.01.c. Use tools and equipment appropriately to complete a specific task.
- Plant Systems (PS):
    - PS.03.02.03.a. Demonstrate proper planting procedures and post-planting care.

Proper planting technique ensures the health of a new tree or shrub.

Student Learning Objectives:
After completing this class, students will be able to:
(1) summarize sound planting practice for containerized, B & B, and bare-root plants, and
(2) diagram how to stake or guy a tree.

Instructional Method: Reading Assignment, Class Activity.

Teacher Preparation:
☐ Obtain three plants. See the section "Classroom Activity" for details.

II. LESSON PLAN

Legend:

Text in normal face - Represents teacher's words.

Text in italic face - Represents suggestions for the teacher.

Interest Approach:

☐ QUESTION: If a newly planted tree fails to thrive, what do you think could be a cause?

☐ ANTICIPATED ANSWERS: *(Entertain responses for 30 to 60 seconds. Write the answers on the board so students can take notes.)*

☐ Planting a tree too deep is a major cause of loss. If you look at the base of a mature tree, do the sides of the trunk remain parallel, so they plunge into the earth like a telephone pole? No, the trunk tapers outward at the base to meet the roots. Even young trees have that flare and you'll see it's an important landmark to guide the proper installation of a tree.

☐ The success of a landscape installation depends on three factors: (1) thorough site analysis and robust plant selection, (2) correct site preparation and planting techniques, and (3) care after planting.

Relevancy:

☐ This lesson will deal with the latter two factors, planting techniques and care after planting.

Learning Objectives:

☐ After completing this lesson, you will be able to:
(1) Summarize sound planting practice for container grown, B & B, and bare-root plants.
(2) Diagram how to stake or guy a tree.

☐ Now let's take a look at a checklist of planting tasks.

Instructional Methods

Reading Assignment: 10 minutes estimated

☐ *Distribute the handout, 21_Installation_Reading.doc.*

☐ Please read the handout on Landscape Installation. You'll have 10 minutes.

☐ On the computer, open the publication you downloaded, "Planting Ornamentals" (Catalog Number UJ253, from the publications site for Pennsylvania State University at http://pubs.cas.psu.edu/freepubs/pdfs/uj253.pdf). Display the drawings on pages 10 and 13 so students can refer to them during the reading assignment; otherwise, pass around copies of the drawings to students during class.

Class Activity: 45 minutes estimated

In advance of class, obtain two or three small trees. As a group, plant each tree according to the instructions in the lesson. Logistically, there are two options.

- ☐ *One option is to schedule a genuine planting installation; ask the school's groundskeeper whether there are plans to add trees to the property; possibly you can coordinate planting day with the day you schedule this lesson. It would be ideal if there were plans to install at least one B & B tree as well as a container growth tree. In early spring the addition of a bare-rooted plant would be beneficial. Trees will be more suitable subjects than shrubs so students can locate the rootflare. If only shrubs are to be planted at the school, then you could guide students on a walk to identify rootflare in newly-planted and established trees on the grounds or in the neighborhood. Students can also be instructed on how to locate the first primary root to determine proper planting depth.*

- ☐ *Another option is to simulate the installation by installing a small container grown plant in a large 20-gallon pot of soil or soilless medium, then removing the plant so you can repeat the exercise with a small B & B plant. If you cannot borrow the materials, purchase materials from a garden center. Small container grown plants should be easy to locate; appropriate sizes would be #1 to #3 containers. But it may be difficult to find trees that small; shrubs would be an acceptable second choice. Even less likely is a B & B plant of similar size; you can simulate a B & B plant for this exercise by unpotting a containerized plant and wrapping it in burlap and string. Students would have to imagine the small plant as being representative of a much larger B & B specimen, and would unwrap the burlap per the instructions as if it had a heavy root ball.*

- ☐ *If both of these options are inconvenient, then consider alternative activities under "Extensions" and "Optional Resources" below.*

Summary:

- ☐ Having had this hands-on experience should provide you with more confidence in approaching your next landscape installation project.

- ☐ We've concluded the series of lessons on landscape design and installation; next we'll examine the basics of running a retail garden center.

OPTIONAL ACTIVITIES

- Invite a landscape contractor to the classroom so students can interview the contractor about desirable and undesirable aspects of the landscaping business.
- Hold a roundtable discussion featuring a panel of students who may have worked as a summer employee for a landscape contractor.
- Assign students a research project to highlight the benefits of establishing a buffer zone around streams. One of the sources is the website of The Alliance for the Chesapeake Bay in the next paragraph.
- Share with students the lists of free resources below and the websites below to encourage further study.

RESOURCES

Free publications and other resources:

- The Alliance for the Chesapeake Bay offers numerous choices of free materials on such topics as plant diversity, buffers, beneficial plants, integrated pest management, invasives, and other conservation issues. The landscape designs in Lesson 17: Design Process was taken with permission from the Alliance, from the brochure "Homeowners' Guide to Designing Your Property." Go to http://www.alliancechesbay.org/ and follow the link for "Publications".
- "Planting Ornamentals" – This 16-page publication covers nursery stock selection and proper planting techniques. Catalog Number UJ253. It was mentioned above in "Instructional Materials Needed". You can download it from http://pubs.cas.psu.edu/freepubs/pdfs/uj253.pdf
- Planting guide – Visit http://hort.ifas.ufl.edu/woody/planting/treeselectionintro.htm and click on the links "Planting" and "Planting Hole".
- PowerPoint presentation – Visit http://hort.ifas.ufl.edu/woody/powerpoints.htm and select "Planting Trees" for a detailed presentation including numerous photographs.

Books:

- Several books and videotapes on the landscape business appear in a catalog from the publisher of one of the nursery trade journals, American Nurseryman Publishing Co., 223 W Jackson Blvd., Ste 500, Chicago, IL 60606, 800-621-5727, www.amerinursery.com

Websites:

- http://www.anla.org/ - American Nursery and Landscape Association.
- http://hort.ifas.ufl.edu/woody/planting/treeselectionintro.htm - Click on the link "Nursery Stock" to learn about issues like rootflare and selecting nursery stock.
- http://www.alca.org/ - Combined website of Associated Landscape Contractors of America and Professional Lawn Care Association of America.
- http://www.pgms.org/ - Professional Grounds Management Society.